



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

May 19, 2014

SECRETARY

COMMISSION VOTING RECORD

DECISION ITEM: SECY-13-0132

TITLE: U.S. NUCLEAR REGULATORY COMMISSION STAFF  
RECOMMENDATION FOR THE DISPOSITION OF  
RECOMMENDATION 1 OF THE NEAR-TERM TASK FORCE  
REPORT

The Commission acted on the subject paper as recorded in the Staff Requirements Memorandum (SRM) of May 19, 2014.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in black ink, reading "Annette Vietti-Cook", is positioned above the printed name.

Annette L. Vietti-Cook  
Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Macfarlane  
Commissioner Svinicki  
Commissioner Apostolakis  
Commissioner Magwood  
Commissioner Ostendorff  
OGC  
EDO  
PDR

VOTING SUMMARY - SECY-13-0132

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. MACFARLANE	X				X	3/6/14
COMR. SVINICKI		X			X	4/8/14
COMR. APOSTOLAKIS	X	X			X	1/22/14
COMR. MAGWOOD	X	X			X	2/14/14
COMR. OSTENDORFF	X				X	2/14/14

**NOTATION VOTE**

**RESPONSE SHEET**

**TO:** Annette Vietti-Cook, Secretary

**FROM:** Chairman Allison M. Macfarlane

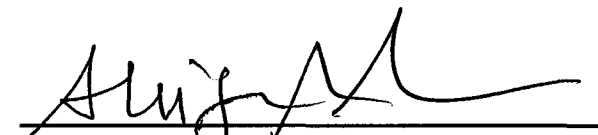
**SUBJECT:** SECY-13-0132 – U.S. NUCLEAR REGULATORY  
COMMISSION STAFF RECOMMENDATION FOR THE  
DISPOSITION OF RECOMMENDATION 1 OF THE  
NEAR-TERM TASK FORCE REPORT

Approved   X   Disapproved        Abstain       

Not Participating       

**COMMENTS:** Below   X   Attached   X   None       

I approve the staff's recommended improvement activities, subject to the attached edits.

  
\_\_\_\_\_  
SIGNATURE

  3/6/14    
\_\_\_\_\_  
DATE

Entered on "STARS" Yes   X   No

**Chairman Macfarlane's Comments on SECY-13-0132**  
**U.S. Nuclear Regulatory Commission Staff Recommendation for the Disposition**  
**of Recommendation 1 of the Near-Term Task Force Report**

Following the accident at the Fukushima Dai-ichi nuclear power plant in March of 2011, the Commission established the Near-Term Task Force to conduct a systematic and methodical review of NRC processes and regulations and to make recommendations to the Commission. I commend the members of that senior-level group in their efforts to act quickly, during a time of evolving information, to develop recommendations for Commission consideration. Nearly three years after the Fukushima accident, the NRC staff continues its diligent work towards evaluating and making improvements to our regulatory oversight of U.S. nuclear power plants, as made evident by the proposed improvement activities outlined in SECY-13-0132. I thank the staff for their dedicated efforts.

As noted by the ACRS in 2013<sup>1</sup>, the Commission continues to face a number of significant policy decisions related to the NRC's regulatory framework that are interrelated. The topic of this SECY – NTTF Recommendation 1 – is linked to the resolution of the Risk Management Task Force recommendations outlined in NUREG-2150 and the regulatory treatment of economic consequences from severe accidents. I believe that it is prudent for the staff to consider these issues holistically in determining how to best move forward in enhancing our regulatory framework. As I stated in my vote for SECY-12-0110, the severe accident at Fukushima Dai-ichi demonstrated that continued NRC effort is warranted to evaluate the merits of expanded consideration of economic consequences in our regulatory framework. Research in the area of public risk perception and risk acceptance indicates a need to look beyond dose projections (given emergency planning) to the potentially large financial, ecological, and sociological impacts when assessing postulated events.

Near-Term Task Force Recommendation 1 involved establishing a "logical, systematic, and coherent regulatory framework for adequate protection that appropriately balances defense-in depth and risk considerations."<sup>2</sup> In response to this complex recommendation, the staff developed three proposed improvement activities. I approve the staff's proposed activities, with edits, as indicated in my comments below.

*Improvement Activity 1: Establish a Design-Basis Extension Category of Events and Associated Regulatory Requirements*

There is merit in the staff's recommendation to develop a new category of "design-basis extension" events to define and describe events that have been previously characterized as "beyond-design-basis" and specify how future requirements for these and any emerging

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<sup>1</sup> ACRS Letter, "SECY-12-0110, Consideration of Economic Consequences Within the U.S. Nuclear Regulatory Commission's Regulatory Framework," November 13, 2012 (ML12317A004)

<sup>2</sup> "Recommendations for Enhancing Reactor Safety in the 21<sup>st</sup> Century, The Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," July 12, 2011 (ML111861807)

"beyond-design-basis" events should be written in a consistent, logical, and complete manner. This effort can provide consistency and efficiency in our regulatory framework. However, I agree with the sentiment of the ACRS<sup>3</sup> and Commissioner Apostolakis that this improvement activity does not fully address the concerns raised by the Near-Term Task Force in Recommendation 1. Specifically, by applying improvement activity 1 in a forward-looking basis only, I am concerned that the shortcomings discussed in the Near-Term Task force report concerning the regulatory treatment of beyond design basis accidents in currently licensed plants will remain unaddressed.

The Risk Management Regulatory Framework (RMRF) working group is currently developing "a statement of policy to establish a common risk management regulatory framework that has consistent implementation elements to be applied to all NRC licensed uses of byproduct, source, and special nuclear materials."<sup>4</sup> One of the specific recommendations outlined by the RMRF report involved a new category of regulatory treatment for beyond-design-basis events. I see this improvement activity as a parallel effort to that of the RMRF. Given that the post-Fukushima activities are well underway and will likely not benefit from this improvement activity, once completed, I believe it is most prudent and efficient for the staff to subsume this improvement activity in the RMRF efforts.

#### *Improvement Activity 2: Establish Commission Expectations for Defense in Depth*

As noted in the Near-Term Task Force report, the Fukushima accident squarely demonstrated the importance of defense-in-depth. I agree that the staff would benefit from Commission direction on defense in depth, and that regulatory guidance should be revised accordingly. However, as also indicated by Commissioners Apostolakis and Magwood, this effort is in many respects parallel to the ongoing efforts under the RMRF. The most efficient manner for the staff to proceed is to have this activity subsumed into the broader RMRF effort, rather than first developing a policy statement specific to reactors.

#### *Improvement Activity 3: Clarify the Role of Voluntary Industry Initiatives in the NRC Regulatory Process*

Soon after the Fukushima accident, the NRC staff conducted inspections and identified that Severe Accident Management Guidelines were implemented inconsistently throughout the industry. These inspection observations provided the NRC valuable insight into just one of many important voluntary initiatives. I agree that there are some benefits to voluntary initiatives – such as the speed with which issues can be addressed, when compared to the time it takes to complete a rulemaking. However, the NRC must remain cognizant of the implementation status and effectiveness of Type 2 voluntary initiatives for which licensees were given credit in

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<sup>3</sup> ACRS Letter, "Draft Commission Paper, NRC Staff Recommendation for the Disposition of Recommendation 1 of the Near-Term Task Force Report," November 20, 2013 (ML13318A135)

<sup>4</sup> "White Paper on a Conceptual Example of a Proposed Risk Management Regulatory Framework Policy Statement," Federal Register Volume 78, Number 227, Pages 70354 – 70356, November 25, 2013 (ML13273A517)

regulatory decision making, and take appropriate action if such credit is no longer warranted. I support the staff's proposed activity to evaluate the current status of implementation on the most risk or safety significant Type 2 initiatives and verify that these voluntary initiatives are being adequately implemented. The staff should inform the Commission of the results of this verification process and any recommended improvements to the voluntary initiative program.

 3/6/14  
Allison M. Macfarlane Date

**NOTATION VOTE**

**RESPONSE SHEET**

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER SVINICKI

SUBJECT: SECY-13-0132 – U.S. NUCLEAR REGULATORY  
COMMISSION STAFF RECOMMENDATION FOR THE  
DISPOSITION OF RECOMMENDATION 1 OF THE  
NEAR-TERM TASK FORCE REPORT

Approved \_\_\_\_\_ Disapproved XX Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

COMMENTS: Below \_\_\_\_ Attached XX None \_\_\_\_

  
SIGNATURE

04/8/14  
DATE

Entered on "STARS" Yes ✓ No \_\_\_\_

**Commissioner Svinicki's Comments on SECY-13-0132**  
**U.S. Nuclear Regulatory Commission Staff Recommendation for the Disposition of**  
**Recommendation 1 of the Near-Term Task Force Report**

I sincerely thank the staff working group that developed these initiatives for their thoughtful work, but I disapprove proceeding forward on the three improvement activities at this time. The staff working group had the difficult task of picking up the thread of the Near-Term Task Force's (NTTF) thinking from which Recommendation 1 arose and synthesizing that thinking with the nearly three years' worth of evaluation and subsequent regulatory action that has already been undertaken by the NRC in the intervening years. In other words, the working group was charged to make the recommendation meaningful, not simply in light of where we were but in recognition of where we are today.

They have done a meritorious job of it, and I find myself in agreement with their conclusion that the "improvement activities are not needed to maintain safety of nuclear power reactors." That said, I fundamentally disagree with their conclusion that the initiatives can be accomplished at only modest resource levels. This conclusion defies credulity and cannot be reconciled with the experiences of recent years, where we have been confronted with figures demonstrating that NRC's cost estimates on a number of regulatory changes have understated reality by orders of magnitude.

On a more dispositive point, I agree with the staff that "[a] viable and acceptable alternative to implementing any or all of these improvement activities would be to maintain the existing regulatory framework of design-basis events augmented with additional regulations as needed" and to "continue under current processes to issue new regulations as needed on a case-by-case basis, as is being done in the NRC's response to the Fukushima Dai-ichi event." Although not expressly stated in the staff's paper, this statement reaches to the core of the Commission's purpose in assigning the staff the task of returning to consideration of Recommendation 1 at the end of the evaluation of Tier 1 Fukushima-related actions. Our purpose for this timing was to analyze -- in retrospect -- whether our regulatory processes had served us well in identifying, evaluating, and taking action on the items arising from the accident in Japan that have the potential to create the greatest safety enhancements.

Any objective look at the amount of work conducted and the substantive regulatory actions taken over the past three years shows that the record as it stands -- where we are today and the regulatory system that got us here -- has served the cause of nuclear safety well. Or, as the staff concludes, "Maintaining the existing regulatory framework would maintain nuclear safety while preserving an approach to regulation that has been successful and is well-understood."

Although I do not approve the improvement initiatives, I offer commentary on each and propose actions related to the issues they raise.

Improvement Activity 1: Establish a Design-Basis Extension Category of Events and Associated Regulatory Requirements

I agree with the working group's conclusion regarding Recommendation 1, wherein they state that

"the NTTF Recommendation 1 proposal to make extensive changes to the regulations and to develop and implement new processes and criteria to identify new events and accidents will not substantively improve nuclear safety and could divert resources away



from other, more effective activities to improve safety. ***This is especially true given the development and implementation of other post-Fukushima improvements such as providing equipment and mitigating strategies to address conditions such as an extended loss of electrical power, which will serve to reduce the overall risk associated with nuclear power reactors.*** (emphasis added)

I part company with the staff's logic, however, when they advocate for Improvement Activity 1 by advancing it as a "simpler, less costly way to address" the same issue. This is much like saying, "We recommend you do something that there is no real basis for doing, because we have crafted a slimmed down subset of it that diverts fewer resources." Make no mistake, Improvement Activity 1 will require real and substantial resources from both the NRC and the regulated community and will result in the diversion of resources "from other, more effective activities to improve safety." It will simply do so to a lesser degree than the scope proposed by the NTTF.

More troubling than this, the staff proposes under this improvement activity to establish and implement "the new design-basis extension category through internal NRC policies, guidance, and procedures rather than through rule-making" and then to use this internally developed framework – one developed outside of the Administrative Procedure Act (APA) process for rule-making – to provide a "basis for future regulatory actions" on design-basis extension regulations. In simple terms, this appears to propose that an internally-developed framework for regulating a new set of activities would be developed outside of the formal, public participation framework that the APA provides and without the Commission's rulemaking imprimatur of making case-by-case adequate protection determinations. I do not support casting aside the Commission's unique role under law and redefining adequate protection, at the staff level, in such an off-hand way.

One initiative that does need to be undertaken, however, relates to the three current or planned rulemaking activities associated with severe accidents and by implication, the treatment of events beyond the design basis. These are the rulemakings on station blackout mitigation, onsite emergency response capabilities, and filtering strategies. Work on these ongoing matters requires NRC staff to make determinations on the appropriate regulatory treatment of events beyond the design basis. They are doing so now and in the absence of any Commission-directed policy for the treatment of these events. The issuance of Commission-approved guidance in this area is needed and should not await other direction on risk-informing the regulatory framework. The staff should develop and provide to the Commission, for its review and approval, a set of guidelines for the appropriate requirements for regulatory treatment of the beyond-design basis events arising from these three rules. This paper should be provided no later than six months after the issuance of the Commission's SRM on SECY-13-0132.

#### Improvement Activity 2: Establish Commission Expectations for Defense-in-Depth

Based on my review of the staff's proposal for Improvement Activity 2, I conclude that the staff advances this improvement as something that may be undertaken but for which no clear need is identified or appears to exist. I find nothing in the record of events at Fukushima that indicts the NRC's longstanding approach to this concept.

The staff advances Improvement Activity 2 for the purpose of providing "a uniform, technically justified, documented basis for the defense-in-depth principle of risk-informed decision making." My reaction to the detailed history provided by the staff is that, when looked at as a whole, our

history demonstrates a tremendous coherency in approaching defense-in-depth. Better still, because we do not embrace one rote and regimented approach to this foundational concept, the NRC preserves flexibility in tailoring applications of defense-in-depth, a flexibility that has served us well and can continue to do so. Study of the defense-in-depth philosophy as enshrined in the NRC's regulatory and backfit guidance only fortifies this view.

In the exercise of developing this proposal, the staff has provided an exceedingly helpful, detailed history of the use of defense-in-depth concepts throughout the development of nuclear power in the United States (Enclosure 3). I consumed this history in one sitting and learned quite a bit. This enclosure should be enshrined as an agency knowledge management tool and republished in other formats to make it more widely available.

### Improvement Activity 3: Clarify the Role of Voluntary Industry Initiatives in the NRC Regulatory Process

The staff advances Improvement Activity 3 for the purpose of "reiterating the current Commission policy that the NRC will not accept industry initiatives in lieu of NRC regulatory action on adequate protection issues." This current policy position is already well-understood and I am not aware of circumstances calling it into question.<sup>1</sup> What I am aware of are instances of staff disagreement with historic Commission calls regarding which activities rise to a level of being required for adequate protection and which do not, but are appropriate for treatment as voluntary industry initiatives. The existence of such differences of opinion between the staff and the Commission long predates the events at Fukushima and is a reflection of the Commission's unique role in determining the threshold for adequate protection.

Moreover, the Commission, in its staff requirements memorandum arising from SECY-99-178, laid out the criteria to be used by the staff in evaluating voluntary initiatives in regulatory guidance. These criteria are still operative and staff disagreement with them is not sufficient to invalidate them. The staff's improvement initiative would have the staff unilaterally revise these criteria. In addition to being an unnecessary undertaking, this initiative would result in an inappropriate staff revision of standing Commission policy, and its approval would be an abdication of the Commission's role in this matter. If a Commission majority approves this activity, any proposed revisions should be provided to the Commission for its review and approval.

The paper acknowledges that there were "conflicting views within the staff on the best path forward," but I find even the negotiated outcome here too close to suggesting that the NRC begin regulating best practices – a slippery slope, at best, and something the NRC may not have the authority to do in all cases. Terms such as "overseeing voluntary initiatives" seem oxymoronic. Moreover, it appears strange to dismiss the regulated community's expressed sentiment: namely, that the NRC's attempt to establish a regulatory footprint on these activities would significantly reduce or eliminate the incentive for licensees to voluntarily pursue safety enhancements. Frankly, it seems odd to conclude that this action would fail to create such an effect.

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<sup>1</sup>Although the NTTF requested that NRC inspectors collect information on how each licensee had implemented Severe Accident Mitigation Guidelines (SAMGs), a voluntary initiative, and found that some licensees had treated the SAMG initiative in a less rigorous and formal manner, the NTTF concluded: "The results of the SAMG inspection do not indicate, nor does the Task Force conclude that, the SAMGs would not have been effective if needed."

## Other matters

In previous votes on NRC's Fukushima-related actions, I have thematically expressed a caution that care be taken to avoid disconnects in logic or sequencing of agency activities. Although, through systematic attention by agency managers at all levels and coordination of our post-Fukushima regulatory actions through the Japan Lessons-Learned Directorate, we have avoided the worst of these disconnects, nonetheless, examples still crop up from time to time. A current disconnect occurs within the seismic hazard re-evaluation process now underway. In this instance, some plants that have "screened out" of the process by virtue of the analyses required to be presented to the NRC by March 31, 2014, may still be required to conduct additional evaluation of spent fuel pool vulnerabilities. The Commission is well advanced in its deliberation of the staff's recommendation to settle the question of spent fuel pool risk generically, through a conservative, bounding analysis previously conducted. If the Commission approves the staff's conclusion in COMSECY-13-0030 resolving this question generically for all U.S. plants and closing this Tier 3 item, the staff should modify through amendment or errata the existing process for seismic hazard re-evaluation [10 CFR 50.54(f) Phase 1] to eliminate the spent fuel pool evaluation step for plants that otherwise "screen out." Additionally, under this circumstance, the staff should consider whether to eliminate the spent fuel pool evaluations for plants that "screen in."

Additionally, whatever path a Commission majority supports as an outcome from this deliberation, Recommendation 1 should be closed. The decision record before us presents a fulsome evaluation, a comprehensive historic look, and an attempt to meaningfully interpret the thinking of the NTTF regarding the regulatory framework, in light of all that has been accomplished in the nearly three years since the NTTF wrote its report. And a substantial set of accomplishments it has been. This was our purpose in sequencing the consideration of Recommendation 1 in this way. However, if a majority elects to advance its consideration of the individual improvement activities forward in time and integrate them with any recommendations arising from the Risk Management Regulatory Framework working group, this would, in itself, constitute Commission action on Recommendation 1 and constitute a disposition of it.

## Conclusion

I appreciate the candor of the evaluation and the efforts of the working group. I suspect some portion of this candor is a reflection of the strongly held and deeply divided views of the staff on these matters. Nonetheless, the Commission's decision making is strengthened, not weakened, by this full airing of perspectives. My disapproval of the three initiatives is, in some sense, a demonstration of how strong the decision making record was, a strength inherent in statements such as this one: "The staff believes that the public would continue to be adequately protected if the Commission took no action at this time on these recommendations."

One of the burdens of leadership is to know when to say no. While sitting with a senior agency executive, one who exercises many delegated authorities on behalf of the Commission, he appealed to me to do what I could to help the NRC's senior career leadership to create enough space and breathing room for the NRC staff to be able to succeed on the many high-priority, safety significant activities already underway. The staff's plate is very full, and they desire to

complete – not just competently, but with high quality – all that we have already laid before them. I pledged to support this cause and hope that my vote is viewed not as a disapproval but as a reflection of my commitment. I thank my Commission colleagues for any consideration they may give it.

  
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Kristine L. Svinicki 04/ 8 /14

**NOTATION VOTE**

**RESPONSE SHEET**

**TO:** Annette Vietti-Cook, Secretary


**FROM:** Commissioner Apostolakis

**SUBJECT:** SECY-13-0132 – U.S. NUCLEAR REGULATORY  
COMMISSION STAFF RECOMMENDATION FOR THE  
DISPOSITION OF RECOMMENDATION 1 OF THE  
NEAR-TERM TASK FORCE REPORT

Approved   X   Disapproved   X   Abstain       

Not Participating       

COMMENTS: Below        Attached   X   None       

  
\_\_\_\_\_  
SIGNATURE

January 22, 2014  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes   x   No

**Commissioner Apostolakis' Comments on SECY-13-0132  
U.S. Nuclear Regulatory Commission Staff Recommendation for the Disposition  
of Recommendation 1 of the Near-Term Task Force Report**

**NTTF Recommendation 1**

As I have stated on a number of occasions, I am extremely impressed with the efforts of the NRC's Near-Term Task Force (NTTF) to produce recommendations for Commission consideration in just 90 days and at a point in time when the accident at Fukushima Dai-ichi was still evolving. The most overarching of all of the NTTF recommendations is Recommendation 1:

The Task Force recommends establishing a logical, systematic, and coherent regulatory framework for adequate protection that appropriately balances defense-in-depth and risk considerations.

This recommendation was clearly intended to spur a fundamental revisiting of the framework for regulation of nuclear power plants. In explaining the basis for its recommendation, the NTTF said:

The Task Force concludes that the NRC's safety approach is incomplete without a strong program for dealing with the unexpected, including severe accidents. Continued reliance on industry initiatives for a fundamental level of defense-in-depth similarly would leave gaps in the NRC regulatory approach. The Commission has clearly established such defense-in-depth severe accident requirements for new reactors (in 10 CFR 52.47(23), 10 CFR 52.79(38), and each design certification rule), thus bringing unity and completeness to the defense-in-depth concept. Taking a similar action, within reasonable and practical bounds appropriate to operating plants, would do the same for operating reactors.

The Task Force therefore concludes that the future regulatory framework should be based on the defense-in-depth philosophy, supported and modified as necessary by state-of-the-art PRA techniques. The Task Force also concludes that the application of defense-in-depth should be strengthened by formally establishing, in the regulations, an appropriate level of defense-in-depth to address requirements for "extended" design-basis events.

The Task Force further explained its vision as follows:

This framework, by itself, would not create new requirements nor eliminate any current requirements. It would provide a more coherent structure within the regulations to facilitate Commission decisions relating to what issues should be subject to NRC requirements and what those requirements ought to be.

This recommendation of the NTTF is consistent with my view that the fundamental principle of defense in depth should be complemented with the systems approach that probabilistic risk assessment (PRA) provides. The NRC has the responsibility to ensure that the risks from the operation of power reactors are acceptably low. Consequently, methods to quantify this risk and identify its major contributors (an essential element of risk management) should be more systematically integrated into the regulatory system. I am disappointed that the staff has proposed a much more limited set of actions in SECY-13-0132 that, in my view, do not come close to what the NTTF envisioned.

## **Summary of Views on Improvement Activities**

With this background in mind, I propose the following actions, explained in more detail below:

1. Improvement Activity 1 should not be pursued as proposed. It does not resolve the fundamental concerns of the NTTF and the Risk Management Task Force (RMTF), and the staff acknowledges that there is limited benefit to be gained.
2. The objectives of Improvement Activity 1 and the discussion in Attachment 2 to Enclosure 1 of SECY-13-0132 should be reconsidered after the Commission provides direction on a long-term Risk Management Regulatory Framework (RMRF).
3. Improvement Activity 2 should be integrated with the staff's efforts regarding the RMRF.
4. Improvement Activity 3 should be approved.

## **Discussion**

I acknowledge the significant amount of thought and effort that the staff has put into the development of its recommendations regarding NTTF Recommendation 1. As the most far-reaching of all of the NTTF's recommendations, it has appropriately received significant attention. Nevertheless, as stated above, I am not in full agreement with the staff's recommendation regarding its three proposed improvement activities.

*Improvement Activity 1:        Establish a Design-Basis Extension Category of Events and Associated Regulatory Requirements*

The staff states that this improvement activity would adopt a new term, "design-basis extension," to define and describe the conditions (events) and requirements which have typically been characterized as beyond design basis. The staff's proposal would formally label the *de facto* category of events traditionally considered to be beyond design basis for which the NRC has chosen to implement generic requirements. The staff contends that this improvement activity would result in ensuring that future design-basis extension requirements (both rules and orders) are written in a consistent, logical, and complete manner.

The staff asserts that the NTTF Recommendation 1 proposal to develop and implement new processes and criteria to identify accidents beyond design basis that deserve some regulatory attention will not substantively improve nuclear safety. Instead, the staff's simplified approach proposes to use existing NRC programs (e.g., reactor operating experience program, generic issues program, and industry trends program) for the identification of new regulatory issues and would use existing guidelines (e.g., regulatory analysis guidelines and safety goals) for determining which regulatory requirements would be imposed to address matters of design-basis extension. These programs have been generally successful in identifying some beyond-design-basis issues that deserve regulatory treatment, but a more systematic search for such issues would be a significant improvement to the regulatory system.

The staff also proposes to develop a standard set of "attributes" and a standard set of treatment guidelines to be addressed when developing future design-basis extension requirements. Although this is a worthy goal, its achievement would be difficult under the staff's proposal. I question whether development of a standard set of treatment guidelines (even differentiating treatments for adequate protection from those for cost-justified safety enhancements) would be a worthwhile effort without clear guidance on which events belong in the design-basis extension category.

In my view, the staff's proposal does little to address the NTTF's concern about NRC's current approach to considering beyond-design-basis requirements. Without establishing guidance as to which events or accident scenarios are candidates for this new design-basis extension category, the ability of Improvement Activity 1 to provide greater clarity and certainty in NRC's regulation of beyond-design-basis events is dubious.

In contrast to the staff's approach, the International Atomic Energy Agency proposes what it calls "design extension conditions" and states that these conditions should be derived "on the basis of engineering judgment, deterministic assessments and probabilistic assessments."<sup>1</sup> This basis suggests a standard for how these conditions, i.e., events and accident scenarios, are to be identified. Such guidance is missing from proposed Improvement Activity 1.

### Long-Term Vision

On June 14, 2012, then-Chairman Jaczko issued a tasking memorandum directing the staff to consider the regulatory framework recommendations for power reactors provided in the Risk Management Task Force (RMTF) report in its development of options for implementing NTTF Recommendation 1. While such consideration is appropriate, there is a fundamental difference between NTTF Recommendation 1 and the RMTF recommendations. The RMTF recommendations deal with the long-term establishment of a risk-informed and performance-based regulatory framework, i.e., 10 to 15 years in the future. NTTF Recommendation 1, like the other NTTF recommendations, anticipates action in the near term with important implications for the future.

The staff discussion in Attachment 2 to Enclosure 1 of SECY-13-0132 does not consider the implications for this distinction. Although this discussion is useful, it should be revisited once the Commission has decided what to do with the RMTF recommendations for a future regulatory framework.

In 1995, the Commission issued its Policy Statement on the Use of Probabilistic Risk Assessment Methods in Nuclear Regulatory Activities. The Policy Statement affirmed the Commission's belief that, among other things,

The use of PRA technology should be increased in all regulatory matters to the extent supported by the state-of-the-art in PRA methods and data and in a manner that complements the NRC's deterministic approach and supports the NRC's traditional defense-in-depth philosophy.

PRA methods and data have advanced significantly since 1995 and are expected to advance further in the next several years. Despite this Commission policy, the staff's proposed improvement activities to address Recommendation 1 do not reflect an increased use of PRA.

### The Cost of PRA

The staff recommends that its proposed design-basis extension category be applied on a generic basis. In promoting a generic approach, the staff states its belief that the possible safety benefits of a site-specific search for vulnerabilities using a site-specific PRA are not cost-justified and that "it is unlikely that the safety benefits of plant-specific assessments would meet the 'substantial increase in overall protection' threshold in the backfit rule." Yet, this appears to be speculation as the staff has not done a rigorous analysis and admits that the estimates of the costs of each improvement activity "do *not* reflect possible future savings attributable to the improvement activities, either as benefits or averted costs."

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<sup>1</sup> International Atomic Energy Agency, *Safety of Nuclear Power Plants: Design, Safety Standard SSR-2/1*, 2012.



The staff readily acknowledges that its qualitative cost-benefit analysis only considered whether the perceived safety benefits from Improvement Activities 1 and 2 were worth the cost of developing site-specific PRAs of the quality and scope necessary to support regulatory use of the type envisioned by the NTTF. Of course, the safety benefits from site-specific PRAs are broader and are not limited to those from Improvement Activities 1 and 2. In addition, it appears that the staff included costs in its estimates for activities which licensees are already undertaking for other reasons (e.g., developing fire and seismic PRAs). This leads one to question whether a more thorough consideration of the benefits and costs of site-specific risk assessments would lead to a different conclusion.

On the subject of the costs and benefits of site-specific PRAs, the Advisory Committee on Reactor Safeguards (ACRS) states<sup>2</sup>:

The staff should reconsider the preliminary characterizations presented on the costs and value of site-specific and generic probabilistic risk assessment (PRA) applications. The discussions appear to be biased toward limited application of PRA in Improvement Activities 1 and 2 and *may inappropriately marginalize and inadvertently prejudice* the value of proceeding with a risk management regulatory framework for operating reactors [emphasis added].

I share the Committee's sentiment.

#### The Site-specific Nature of Risk

Although I agree that there may be ways to achieve the NTTF's and RMTF's goals using a predominantly generic approach, failure to acknowledge site-specific risk insights would greatly diminish the value of any process pursued. Summarizing the lessons learned from several industry-sponsored, plant-specific PRAs<sup>3</sup>, the director of these studies states: "The extent to which risk is plant specific was demonstrated by the differences in risk levels and contributors between Indian Point Units 2 and 3, which are sister units."<sup>4</sup>

Similar sentiments were expressed by Mr. Roy Linthicum from Exelon Nuclear at the January 10, 2014 Commission briefing on Recommendation 1. Mr. Linthicum is the chairman of the Pressurized Water Reactor Owners Group Risk Management Subcommittee. He stated that the Subcommittee members have a concern with the staff's proposal on Recommendation 1 because they don't see how risk insights will be used to support the initiative. He made the following comments<sup>5</sup>:

We also feel we need to allow the use of plant-specific risk insights. There is a large difference in plant capability across the fleet, even similar plants that have a very similar design, they may be shared sites, actually can have significantly different risk profiles and we need to be able to use those risk insights on a plant-specific basis, not just look at generic risk insights. And though we do acknowledge that as written Improvement Activity 1 would not require a full scale PRA, not really looking at the risk insights and allowing the use of plant-specific insights and allowing the use of plant-specific PRAs, we feel [will] only increase the burden on our staff by adding new regulation and not

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<sup>2</sup> Report from J. S. Armijo, Chairman, Advisory Committee on Reactor Safeguards, to A. M. Macfarlane, Chairman, NRC. Subject: Draft Commission Paper, "NRC Staff Recommendation for the Disposition of Recommendation 1 of the Near-Term Task Force Report." November 20, 2013.

<sup>3</sup> The term "site-specific" is broader and includes the term "plant-specific."

<sup>4</sup> B. John Garrick, "Recent Case Studies and Advancements in Probabilistic Risk Assessment," *Risk Analysis*, 4:267-279, 1984.

<sup>5</sup> Tr. at 16-17.

allow us to get relief on regulation that's not providing additional cost-benefit. And we think that an appropriately implemented Recommendation 1 would give us the incentive to build PRA models in order to move forward and apply those risk insights on a plant-specific basis.

Finally, it is worth mentioning a recent letter from the Nuclear Energy Institute (NEI)<sup>6</sup> where it is stated that "one value of a PRA is identifying latent and sometimes unknown risk outliers and confirming the importance of such outliers." NEI proposes a four-phase approach to "reclaiming the promise of risk-informed decision-making." The objective of the fourth phase (to be completed by 2019) is to "obtain detailed, site-specific understanding of dominant risk contributors." I am pleased to see that the industry is adopting a plan for moving towards a more risk-informed approach to nuclear power plant safety.

In my view, the value of a site-specific PRA cannot be overstated.

For these reasons, Improvement Activity 1 should not be pursued as proposed. The objectives of Improvement Activity 1 and the discussion in Attachment 2 to Enclosure 1 of SECY-13-0132 should be reconsidered after the Commission provides direction on the RMRF.

*Improvement Activity 2: Establish Commission Expectations for Defense-In-Depth*

This improvement activity would establish the Commission's expectations for defense in depth as applied to nuclear power reactor safety through development of a policy statement and implementation guidance to support regulatory decisions.

I agree with the staff that there is merit in establishing the Commission's expectations for defense in depth in a policy statement. A Commission policy statement reconfirming the commitment to risk-informed and performance-based regulation in a defense-in-depth framework is essential to any improvements to our regulatory framework. However, a Commission decision on this activity should have the benefit of the staff's ongoing efforts on the RMRF, both for efficiency and long-term effectiveness. Given that the Commission is set to consider a possible RMRF policy six months after it issues the Staff Requirements Memorandum on SECY-13-0132, it would appear prudent to wait for Commission direction on the RMRF before proceeding to issue a policy statement on defense in depth that would apply only to nuclear power reactors.

As explained in the staff's "White Paper on a Conceptual Example of a Proposed Risk Management Regulatory Framework Policy Statement" published on November 25, 2013, this effort is designed to

set forth a possible Commission policy regarding the use of a structured decision-making model that results in risk-informed and performance-based defense-in-depth protections to: Ensure appropriate personnel, barriers, and controls to prevent, contain, and mitigate possible inadvertent exposure to radioactive material according to the hazard present, the relevant scenarios, and the associated uncertainties; and ensure that the risks resulting from the failure of some or all of the established barriers and controls, including human errors, are maintained acceptably low.

The staff's efforts regarding a RMRF are oriented toward developing "a policy to establish a common risk management regulatory framework that has consistent implementation elements to be applied to all NRC licensed uses of byproduct, source and special nuclear materials."

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<sup>6</sup> Letter from A. R. Pietrangelo, Senior Vice President, NEI, to A. M. Macfarlane, Chairman, NRC. Subject: Industry Support and Use of PRA and Risk-Informed Regulation. December 19, 2013.

In this context, the ACRS notes:

Establishing the Commission's expectations for defense in depth through a Commission Policy Statement that includes the definition, objectives, and principles of defense in depth is valuable only if there also is clear direction to move forward with a regulatory framework which includes development of a risk-informed, performance-based, defense-in-depth concept. The staff's proposed disposition of NTTF Recommendation 1 does not fully embrace this fundamental concept. Commission direction on the long-term plan for a risk management regulatory framework is needed.

Mr. Tony Pietrangelo of NEI made similar comments at the January 10, 2014 Commission briefing<sup>7</sup>:

[W]e could argue what defense-in-depth is for the next, or try to define it and put criteria around it for a long, long time. And what the staff proposed is a pretty significant effort, I think, in here. But I think again, to me it's a lot like adequate protection. That's not defined anywhere either. But, you know, you as a body, and that's your prerogative, decide within your process when you would implement those kind of things. And I don't think we would, I'm not against trying to look at it maybe a little bit more within the context of the risk management framework. Just to describe how it better fits in with the decision criteria of 1.174 might be useful. I'm open to that suggestion. I don't think it belongs in the Recommendation 1 arena.

To be clear, my position to defer a decision on Improvement Activity 2 does not represent any dissatisfaction with the staff's efforts on this activity. The staff has done an exemplary job of recounting the history of the agency's work on the defense-in-depth philosophy, and I am generally supportive of its work on Improvement Activity 2.

*Improvement Activity 3: Clarify the Role of Voluntary Industry Initiatives in the NRC Regulatory Process*

This improvement activity would clarify the role of industry initiatives in the NRC's regulatory processes by (1) re-affirming the Commission's expectation that industry initiatives may not be used in lieu of NRC regulatory action where a question of adequate protection of public health and safety exists; (2) specifying when industry initiatives may be credited in the baseline case for regulatory analyses; and (3) providing guidance regarding what type and level of licensee documentation and NRC oversight is appropriate for future voluntary initiatives.

As the staff noted in Enclosure 1 to SECY-13-0132, NRC actions following the Fukushima Dai-ichi event highlighted that some measures previously put in place as voluntary initiatives in the U.S. to deal with severe accidents were not subject to NRC inspection or enforcement activities. As a result, the implementation and maintenance of the industry initiatives did not, in some cases, provide the desired degree of confidence that equipment or procedures would have worked as the NRC had intended when an industry initiative was accepted in lieu of taking regulatory action.

With this in mind, I acknowledge the staff's intention, as stated in Improvement Activity 3, to perform verification activities to ensure that certain existing voluntary industry initiatives are being consistently maintained. I also approve the staff's proposal to revise the Regulatory

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<sup>7</sup> Tr. at 47.

Analysis Guidelines to credit only those voluntary initiatives that are well documented and are determined to be highly likely to be effectively implemented and maintained over time.

### **Concluding Remarks**

As I stated earlier, the NTTF Recommendation 1 is the most far-reaching of all of the NTTF's recommendations. Yet, as the ACRS concludes, and the staff agrees, "[t]he staff's proposed approach to disposition NTTF Recommendation 1 will provide limited improvement to the current regulatory structure."<sup>8</sup>

I agree with the ACRS's and the staff's view on the limited benefit to be gained under the staff's approach to Recommendation 1. I continue to believe that a more comprehensive change to the NRC's regulatory framework is necessary to ensure that we are using the most advanced tools and taking into account all relevant information in regulating the use of nuclear materials to protect public health and safety.

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<sup>8</sup> Letter from M. A. Satorius, Executive Director for Operations, to S.J. Armijo, Chairman, ACRS. Subject: Staff Disposition of Recommendation 1 of the Near-Term Task Force Report. December 6, 2013.

**NOTATION VOTE**

**RESPONSE SHEET**

**TO:** Annette Vietti-Cook, Secretary

**FROM:** Commissioner Magwood

**SUBJECT:** SECY-13-0132 – U.S. NUCLEAR REGULATORY  
COMMISSION STAFF RECOMMENDATION FOR THE  
DISPOSITION OF RECOMMENDATION 1 OF THE  
NEAR-TERM TASK FORCE REPORT

Approved   X   Disapproved   X   Abstain       

Not Participating       

**COMMENTS:** Below        Attached   X   None       

  
\_\_\_\_\_  
**SIGNATURE**

14 February 2014  
**DATE**

Entered on "STARS" Yes   X   No

**Commissioner Magwood's Comments on SECY-13-0132,  
"U.S. Nuclear Regulatory Commission Staff Recommendation For  
The Disposition of Recommendation 1 of The Near-Term Task Force Report"**

In the almost three years since the Fukushima crisis, the NRC staff's efforts to respond to the lessons learned from this tragedy have been—and continue to be—exemplary. As the agency has grappled with a wide range of difficult issues, few have been as complex as the consideration of Near-Term Task Force (NTTF) Recommendation 1. In its review of this matter and the development of recommendations, staff's work has been excellent, and I greatly appreciate the hard work and creative thinking that is reflected in SECY-13-0132.

In the months and years following the tragic events in Japan, the safety of U.S. plants has been enhanced as nuclear plant operators implement NRC-required Tier 1 and Tier 2 activities. I commend the NRC staff for their continued focus on addressing the most important lessons learned while involving the public and ensuring that implementation issues raised by the regulated community are addressed. As I have visited U.S. plants in recent months, the post-Fukushima enhancements and improvements are quite apparent, both with the addition of equipment and strategies available to respond to a beyond-design-basis event and the heightened awareness of the nuclear power plant staffs who would respond to the beyond-design-basis scenarios. Nuclear safety in the United States has already been enhanced as post-Fukushima actions have been taken and more will be completed in the coming months and years.

While we are confident that our existing regulatory framework will ensure successful implementation of the many post-Fukushima measures, it is that framework itself that is the subject of review in Recommendation 1. In its report, when discussing its evaluation of the existing regulatory framework, the NTTF utilized the term "patchwork" three times. This term, which highlights the manner in which preparation for beyond-design-basis events has been regulated in the past, has been the source of some confusion as it was meant to be descriptive and is often interpreted as a pejorative. In reality, our current framework has successfully integrated evolving regulatory requirements and safety initiatives to maintain safety, and assures protection of public health and safety. Thus far, implementation of the post-Fukushima regulatory initiatives has demonstrated the ability of the NRC to respond swiftly and responsibly to emerging challenges without sacrificing the quality of our work or the comprehensive stakeholder interaction upon which the most effective regulatory actions are based.

SECY-13-0132 presented the staff's proposal for the most far-reaching of all the NTTF proposals, Recommendation 1, which stated:

*The Task Force recommends establishing a logical, systematic, and coherent regulatory framework for adequate protection that appropriately balances defense-in-depth and risk considerations.*

The staff spent a significant amount of time and effort developing an approach to fully define the issues reflected in NTTF Recommendation 1 and to recommend steps to address areas for improvement. In the subject SECY, staff proposes three improvement activities for the disposition of NTTF Recommendation 1.

## **Improvement Activities 1 and 2**

The first two proposed improvement activities are an attempt to strike at the heart of the challenge presented by Recommendation 1:

- Improvement Activity 1, "Establish a Design-Basis Extension Category of Events and Associated Regulatory Requirements," and
- Improvement Activity 2, "Establish Commission Expectations for Defense-In-Depth."

Staff's recommendations have merit and could provide some improvement in the consistency of the agency's approach to beyond-design-basis events. However, it is not clear to me that the effort these activities would require is justified by what both the ACRS and staff have identified as only modest or limited improvement to the current regulatory structure. Further, I agree with Commissioner Apostolakis' observation that staff's consideration of these activities appears to have a very narrow view of the value of PRA techniques as an element of the solution to the challenges posed by Recommendation 1. Given these concerns and others as discussed below, it is my view that Improvement Activities 1 and 2 should not be pursued as proposed.

In part, I find that the problem in addressing this complex matter is that we are still developing the elements of the framework the NTTF seems to have believed is needed. As the ACRS noted, the most successful regulatory framework is one that embodies the concepts of risk and defense-in-depth as fundamental elements of a rational, objective, performance-based and integrated decision making process.

Several activities relevant to this subject are currently ongoing. For example:

- the Risk Management Regulatory Framework (RMRF) working group is developing "a policy to establish a common risk management regulatory framework that has consistent implementation elements to be applied to all NRC licensed uses of byproduct, source and special nuclear materials";
- staff continues working on a SECY paper as directed in the SRM for COMGEA-12-001/COMWDM-12-0002 to evaluate using a site specific, risk-informed approach for prioritizing regulatory actions;
- a joint NRC-industry steering committee has been formed to address a number of policy and technical issues related to the use of PRA in risk-informed regulatory decision making; and
- industry has and is pursuing related initiatives, such as the December 2011 EPRI Report 1022997, entitled, "Identification of External Hazards for Analysis in Probabilistic Risk Assessment," and tabletop exercises to explore regulatory prioritization.

Once these efforts are completed, they can provide a more complete picture of whether and how the current framework could be enhanced. I recommend that staff submit an information paper to the Commission describing how it plans to integrate these activities and apply their results to consider future changes to the regulatory framework.

The staff also recommends development of a policy statement to further clarify defense-in-depth. There is merit in this proposal. However, I believe a somewhat more focused policy statement is needed—one that addresses how the agency should address beyond-design-basis events while appropriately incorporating risk-informed decisions and defense-in-depth. I support the proposal made by Commissioner Apostolakis to wait for Commission direction on the Risk Management Regulatory Framework before proceeding to develop a policy statement that would apply only to power reactors.

I also believe there is merit in staff's recommendation to draw upon past precedent to enhance the existing regulatory guidance for defense in depth. This work should be done in a collaborative manner with all stakeholders and a final draft provided to the Commission for review. In addition, the staff should consider converting Enclosure 3 of SECY-13-0132 into a knowledge management tool for NRC staff training, reference and qualification.

I note that staff proposes, as an element of Improvement Activity 1, that the NRC adopt a new term—"design-basis extension"—to capture events that have typically been characterized as "beyond-design-basis" events and accidents in order to define regulatory requirements on licensees. As proposed, design-basis extension events would be those not currently considered to be design-basis events or accidents, but for which a regulatory posture is appropriate because their prevention and/or mitigation is necessary for reasonable assurance of adequate protection or should be regulated because their prevention and/or mitigation would result in a substantial safety improvement at a cost that is justified in view of the increased protection.

"Design basis" is defined in 10 CFR 50.2, and is a subset of a facility's license basis with the most prescriptive regulatory requirements for a facility's structures, systems and components, which address "design basis accidents" (the anticipated operational occurrences and postulated accidents that may occur). On the other hand, NUREG-1913, "Design Control," provides a description of a facility's *licensing basis*. This is commonly referred to as the current licensing basis (CLB) and clarifies that the NRC has authority to regulate "beyond-design-basis" and has done so on occasion. In 10 CFR 54.3(a), the CLB is described as:

*[T]he set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect.*

Therefore, in our existing regulatory framework, many of the events that NRC staff characterizes as "design-basis extension" events in SECY-13-0132, currently have a regulatory footprint and others could be addressed by the existing regulatory programs. Certainly, both the staff and licensees have many years of operating experience to draw upon with respect to implementation of regulatory imperatives covering beyond-design-basis events, including rules addressing station blackout and anticipated transients without scrams, or initiatives on low power shutdown risk.

Thus, I do not find that the creation of a new "design-basis extension" category, with criteria for regulatory attributes, is warranted. Moreover, it remains unclear to me that a licensee's preparation for events that would be captured by the recommended "design-basis extension" category would be any different from preparation of all beyond-design-basis events. For example, the Mitigating Strategies order issued in 2012 is not designed to enable a plant to



respond to an earthquake, flood, or other such event of only a defined and limited magnitude; it is designed to provide plant personnel the tools to respond to a broad range of beyond-design-basis events. As such, the creation of such a "middle" category seems pointless, extraneous, and confusing.

### **Improvement Activity 3**

Staff has proposed Improvement Activity 3, "Clarify the Role of Voluntary Industry Initiatives in the NRC Regulatory Process." Under this activity, staff proposes to clarify the role of Type 2 industry initiatives in the NRC's regulatory processes by:

- 1) re-affirming the Commission's expectation that initiatives may not be used in lieu of NRC regulatory action on adequate protection issues,
- 2) specifying when these initiatives may be credited in the baseline case for regulatory analyses, and
- 3) providing guidance regarding what type and level of licensee documentation and NRC oversight is appropriate for future voluntary initiatives.

In considering the evolution of the current voluntary initiative program and its review by the Commission, it is worth noting that in the SRM for SECY-99-178, the Commission stated:

*[T]he staff should inform the Commission, on a timely basis, of safety problems and/or benefits of the licensee's voluntary programs.*

*It must be clear to the public that substituting voluntary industry initiatives for NRC regulatory action can provide effective and efficient resolution of issues, will in no way compromise plant safety, and does not represent a reduction in NRC's commitment to safety and sound regulation. The NRC and the industry are jointly responsible for the long term success of using voluntary industry initiatives as substitutes for NRC regulatory action. Licensees must effectively manage and implement their commitments associated with these voluntary initiatives and the NRC must provide a credible and predictable regulatory response if licensees fail to satisfy these commitments.*

Since 2000, as part of the Reactor Oversight Process (ROP) described in NRC Inspection Manual Chapter 0308, the NRC oversees risk significant, performance-based voluntary initiatives in the implementation of the baseline inspection program. Low power shutdown risk, the most risk significant voluntary initiative, is part of the normal baseline inspection program and is inspected every time a nuclear plant shuts down, in accordance with Inspection Procedure 71111.20, "Refueling and Other Outage Activities." This would indicate that for the most risk significant, performance-based voluntary initiative, the NRC has the appropriate mechanism for oversight in place and licensees have demonstrated that they can effectively implement and maintain a voluntary initiative over time. It is also worth noting that the individual plant performance indicators, which form part of the foundation of the ROP assessment process, are predicated on another voluntary initiative that the NRC oversees and licensees effectively implement to assess overall plant performance.

While the NRC's ability to enforce industry initiatives is limited, NRC inspectors publicly document findings for performance deficiencies involving voluntary initiatives that are greater than minor. NRC staff subsequently assigns those findings the appropriate risk significance level in accordance with the Significance Determination Process and Inspection Manual Chapter 0612, "Power Reactor Inspection Reports." Oversight of risk significant voluntary initiatives is an active part of the ROP commensurate with the associated risk significance. Further, the majority of Type 2 voluntary initiatives are also part of a facility's current licensing basis. Finally, reporting of changes to the NRC of the majority of Type 2 voluntary initiatives may be addressed in guidance already contained in Regulatory Issue Summary 2000-17, "Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff," which the NRC staff has stated is an acceptable way for licensees to control regulatory commitments and report changes.

As the Commission observed in 1999, applying voluntary industry initiatives rather than NRC regulatory action can, when used appropriately, provide effective and efficient resolution of issues. Voluntary initiatives represent a reduction in neither safety nor sound regulation. Further, as a general matter, it is my view that we should not arbitrarily change the rules on these activities without a clear safety imperative. The staff should continue to utilize the current flexibilities inherent in the ROP to ensure that licensee voluntary initiatives continue to be effectively implemented and NRC oversight is maintained.

I note that the recent review of NRC practices and policies by the International Regulatory Review Service (IRRS) observed that while the agency has established measures to further ensure that licensees have the primary responsibility for safety, the NRC should do more. In responding to this point, staff correctly pointed to the many successful voluntary activities carried out by licensees. Activities that provide a disincentive to industry to engage in useful voluntary initiatives now and in the future would be inconsistent with the advice provided by the IRRS. I believe the proposed approach reflected in Improvement Activity 3 risks just such a condition.

Consequently, I do not support all of staff's proposals under Improvement Activity 3. Instead, I recommend that staff should only proceed with the evaluation suggested in SECY-13-0132 to review the current status of licensee implementation and NRC oversight on those existing Type 2 initiatives that are most safety significant. Following completion of the evaluation, the staff should provide to the Commission an objective assessment of the current status and a recommendation of any improvements, if warranted, in the implementation of the voluntary initiative program.


If this evaluation identifies inadequate implementation of the more safety significant voluntary activities, it would be appropriate for staff to consider whether such activities should be industry voluntary initiatives or fully incorporated into regulation.

## **Conclusion**

I conclude by noting that the agency has proceeded successfully with its response to the Fukushima disaster without the aid of the framework enhancements suggested by the NNTF when it penned Recommendation 1. Even if the Commission were to approve staff's recommendations in SECY-13-0132, it is unlikely that the work they entail would be completed in time to support the implementation of the agency's post-Fukushima efforts. For that reason, I recommend the termination of further work on this specific recommendation.

In any event, NTTF Recommendation 1 was always less a response to Fukushima than a suggestion to enhance our regulatory framework to address more readily beyond-design-basis events. Its motivations and outcomes are more in line with those of efforts such as the Risk Management Regulatory Framework. It is best to absorb these considerations into our consideration of the RMRF and other, interrelated activities.

Despite my decision to not support the recommendations contained in SECY-13-0132, I reiterate my thanks to the staff who worked on this difficult project. They provided a very clear and well thought-out paper for the Commission's consideration and presented rational, defensible recommendations. I look forward to their continued support and creative ideas as the agency continues to consider enhancements to its successful regulatory framework.

 2/14/14  
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William D. Magwood, IV Date

**NOTATION VOTE**

**RESPONSE SHEET**

TO: Annette Vietti-Cook, Secretary


FROM: COMMISSIONER OSTENDORFF

SUBJECT: SECY-13-0132 – U.S. NUCLEAR REGULATORY  
COMMISSION STAFF RECOMMENDATION FOR THE  
DISPOSITION OF RECOMMENDATION 1 OF THE  
NEAR-TERM TASK FORCE REPORT

Approved   X   Disapproved        Abstain       

Not Participating       

COMMENTS: Below        Attached   X   None       

  
\_\_\_\_\_  
SIGNATURE

  2/14/14    
\_\_\_\_\_  
DATE

| Entered on "STARS" Yes   X   No

**Commissioner Ostendorff's Comments on SECY-13-0132,  
"U.S. Nuclear Regulatory Commission Staff Recommendation for the Disposition of  
Recommendation 1 of the Near Term-Task Force Report"**

I commend the staff for their diligence and thoughtful work on SECY-13-0132. I approve the staff's recommendation to pursue proposed Improvement Activities 1, 2 and 3 with additional comments below.

In my vote on SECY-11-0093, "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan," I reiterated my statement from the July 19, 2011, public meeting: "While I support thoughtful consideration of any potential safety enhancements in a systematic and holistic manner, I do not believe that our existing regulatory framework is broken." In my vote, I also stated that the Steering Committee should assess the Near-Term Task Force (NTTF) recommendations through the lens of the NTTF's finding that "the current regulatory approach has served the Commission and the public well," and that the staff should continue to consider risk insights and defense-in-depth, consistent with existing practices, to inform their recommendations on what actions may provide for a substantial increase in safety or are necessary to provide reasonable assurance of adequate protection.

Everything that I have seen during my time as a Commissioner, and particularly what I have witnessed during the almost three years since the Fukushima accident, has shown that the current regulatory process has in fact served us well. This agency has already addressed the most safety-significant post-Fukushima actions under our current regulatory framework and so too does it appear that the Commission will likewise be able to disposition *all* Fukushima Dai-ichi Tier 1, 2, and 3 actions under this same regulatory framework.

I agree with Commissioner Magwood that our current framework has successfully integrated evolving regulatory requirements and safety initiatives to maintain safety, and assures protection of public health and safety. Further, I strongly believe that new requirements imposed in response to operating experience, including those taken in response to the Fukushima accident, serve to strengthen the NRC's regulatory approach rather than "patch" it. Learning from operating experience has been a cornerstone of the NRC's regulatory process since its inception and is central to the continuous assurance of adequate protection. The current effort to re-evaluate seismic and flooding hazards for all nuclear power plant sites is a prime example of the important role that operating experience evaluation plays in our regulatory process.

That said, in my vote on SECY-11-0093, I also supported moving forward on Recommendation 1, independent of the review of the other recommendations of the NTTF, consistent with the NRC's organizational value of Excellence that drives us to be continuously improving and self-aware. The NTTF completed a commendable body of work. But it is important to note that they only had 90 days to do their work. In the two and a half years since the July 2011 delivery of the NTTF report, the thinking on NTTF Recommendation 1 has benefitted greatly from the staff's careful review of that recommendation in the light of the recent experience of dispositioning the other Fukushima recommendations under our current regulatory framework. Based on this review, the staff has proposed a practical and measured approach to disposition Recommendation 1. This approach provides additional clarity on the attributes of so-called "design basis extension" rules, the consideration of defense-in-depth in regulatory decision making, and the treatment of industry voluntary initiatives. To the extent that our regulatory process could benefit from additional clarity in these areas, I support the proposed improvement activities recommended by the staff, as discussed in more detail below.

I commend Commissioner Apostolakis for his leadership of the Risk-Managed Task Force (RMTF) and for the task force members' contribution to NUREG-2150, "A Proposed Risk Management Regulatory Framework." This work started prior to the Fukushima accident, and its scope broadly encompasses all NRC program areas, not just power reactors. The report provides a long-term strategic vision of a framework for future NRC regulatory activities. This work also extends beyond reactor safety to include security. I appreciate Commissioner Apostolakis' initiative to include security in this effort and I particularly look forward to the staff's recommendations in this area.

I view nothing in my vote on NTTF Recommendation 1 as conflicting with the long term goals and objectives stated in the RMTF's report, or prejudging the outcome of deliberations on future recommendations in this area. As stated in SECY-13-0132, "these three improvement activities could serve as a logical foundation which the staff can build upon when developing its plan to address the RMTF report recommendations for establishing a Risk Management Regulatory Framework." That said, I think it is important for the NRC to bring NTTF Recommendation 1 to a close. Any related work on RMRF going forward should be treated outside the scope of the NRC's post-Fukushima actions.

#### Improvement Activity 1

This activity is a modest and prudent step to enhance our regulatory framework. I acknowledge the criticism of some that proposed Improvement Activity 1 is not as extensive as originally envisioned by the NTTF. But as I noted previously, significant work has been done in this area since July 2011, and the staff's thinking has appropriately evolved in a constructive, pragmatic manner. In my view, the limited scope of this activity is fully justified in light of the Commission's experience in implementing important safety enhancements in response to lessons learned from the Fukushima accident under our current regulatory framework. This framework includes established processes to evaluate new information and operational experience to impose new requirements when necessary to ensure reasonable assurance of adequate protection or when shown to be a cost-justified substantial safety improvement. The staff stated in SECY-13-0132 that "[m]aintaining the existing regulatory framework would maintain nuclear safety while preserving an approach to regulation that has been successful and is well understood." I agree with this statement. The Commission's experience dispositioning the NTTF Tier 1 actions has demonstrated that the NRC's regulatory framework is robust, and the NRC has appropriate processes in place to address safety concerns when warranted. However, I also agree with the staff's conclusion that enhanced NRC guidance for writing future design-basis extension requirements, including the need to address "attributes" such as performance goals, treatment requirements, documentation requirements, change processes, and reporting requirements, would result in a more consistent, logical, and complete approach to future rulemakings. For example, it has been challenging for the staff to determine what "pedigree" and quality assurance requirements are appropriate for post-Fukushima enhancements such as spent fuel pool level instrumentation and the so-called flex equipment for mitigation of a prolonged station blackout. The proposed enhanced guidance envisioned by Activity 1, if in place, would have provided greater clarity on these decisions. This activity would enhance our rulemaking in the area of beyond design basis events in a cost-effective manner while also increasing the transparency and predictability of NRC decision-making. Therefore I approve the staff's proposed Improvement Activity 1.

### Improvement Activity 2

As discussed above, recent experience in dispositioning the NTTF Recommendations has shown that the NRC's current regulatory framework provides a robust structure to evaluate new information and impose new requirements when warranted. This framework includes defense-in-depth as a major guiding principle. However, there are various ways of describing defense-in-depth and limited guidance currently exists on its application. For this reason, I approve the staff's proposed actions to enhance our regulatory framework to provide a more consistent structure for considering defense-in-depth in decision-making.

### Improvement Activity 3

As discussed in the NTTF report, inspections of severe accident management guidelines after the Fukushima accident identified inconsistent implementation of this important voluntary initiative. Based on these insights, I fully support the staff's planned actions to verify that the most risk significant or safety significant existing voluntary industry initiatives are being consistently maintained. The staff should inform the Commission of the results of this verification and promptly identify any safety concerns that are identified. To ensure that the safety benefits from industry initiatives are consistently implemented and maintained over time, I also fully support and approve the staff's proposal to clarify the NRC's policies regarding how industry initiatives are credited in regulatory analysis and to add risk informed regulatory oversight of Type 2 industry initiatives.

In conclusion, I commend the staff for providing a thorough and thoughtful analysis of these issues to inform Commission decision-making. The technical and regulatory competence of the staff has been demonstrated time and time again in the high quality of papers that have been provided to the Commission addressing the lessons from the Fukushima accident. I look forward to dispositioning remaining Fukushima activities as expeditiously as possible.